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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,963	03/30/2001	Alexander Flaig	TI-34298	3906
23494 7590 02/24/2009 TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				
EXAMINER				
TSE, YOUNG TOI				
ART UNIT		PAPER NUMBER		
2611				
NOTIFICATION DATE		DELIVERY MODE		
02/24/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[uspto@ti.com](mailto:uspto@ti.com)

# Office Action Summary

**Application No.**

09/820,963

**Applicant(s)**

FLAIG ET AL.

**Examiner**

YOUNG T. TSE

**Art Unit**

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8-18, 20-33, 35-44 and 46-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-30, 35-39, 51 and 52 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-18, 20-25, 31, 43, 44, 53 and 54 is/are rejected.
- 7) ☒ Claim(s) 25, 32, 33, 40-44, and 46-50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 25, 32-33, 40-44, and 46-50 are objected to because of the following informalities:

Claim 25 (line 4) and claims 32-33 (line 3), "generator" should be "generation".

Claim 40, line 13, "the regeneration-factor signals" should be "the plurality of regeneration-factor signals". Claims 41-44 and 46-50 are objected to because they all depend from the objected precedent claim 40.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 31 and 53-54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 31 and 53-54 recites the estimation of a phase and an amplitude of each multipath component associated with a received signal based on a pilot signal was not

described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

According to the invention described in the specification (see paragraphs [0052] and [0070], the estimation of the phase and amplitude appears performed by the channel estimation circuits shown in Figures 5 and 8. However, the specification fails to describe which part(s) and/or element(s) shown in Figures 5 and 8 are used to perform the operation or estimation of the phase and amplitude.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 43-44 and 53-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 2 of both claims 43 and 44, is the phrase "a plurality of regeneration factors" difference than "a plurality of regeneration factors" recited in the earlier precedent claim 40, lines 2-3?

Claims 53 and 54 are vague and indefinite because the estimating step recited in claim 53 and the low pass filtering step recited in claim 54 have no relationship, connection and/or cooperation with the frequency offset determining step in order to determine the estimation of the phase and amplitude of each multipath component.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-6, 8-18, 20-25, and 54 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent<sup>1</sup> and recent Federal Circuit decisions<sup>2</sup> indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example, the independent method claim 1 including steps of determining a regeneration factors associated with a first user and a second user, respectively; the independent method claim 13 including steps of receiving a signal, determining a plurality of regeneration factors, and modifying a regenerated signal; the independent method claim 25 including steps of determining a plurality of regeneration factors and canceling interference; and the independent method claim 54 including steps of determining a cutoff frequency and low pass filter a plurality of rake finger signals are of sufficient breadth that they would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine.

<sup>1</sup> Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876).

2 IN re Bilski, 88 USPQ2d 1385 (Fed. Cir. 2008).

***Allowable Subject Matter***

8. The indicated allowability of claim 25 is withdrawn in view of the newly discovered reference(s) to Vadgama. Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claim 25 is rejected under 35 U.S.C. 102(e) as being anticipated by Vadgama (U.S. Patent No. 7,149,200).

Regarding claim 25, Vadgama discloses a CDMA receiver 10 shown in Figure 1 comprising a wanted processing section 12, an interference processing section 14, and a path searcher 16. As shown in Figure 1, the code identity deviation circuit 52, the coder generator 46, and the path search 16 perform the determining of a plurality of soft-decision regeneration factors associated with a plurality of users of the fingers, each soft-decision regeneration factor from the plurality of soft-decision regenerator factors being uniquely associated with each user from the plurality of users; and the interference cancellation circuit 48 performs canceling interference, for a first user from

the plurality of users, from a received signal Rx based on the plurality of soft-decision regeneration factors excluding the soft-decision regeneration factor associated with the first user (col. 5, line 60 to col. 6, line 8).

***Allowable Subject Matter***

11. Claims 26-30, 35-39, and 51-52 are allowed.
12. Claims 32-33, 40-44, and 46-50 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bonori et al. relates to intrusion sensors for alarm systems including a low pass filter having a cutoff frequency at a Doppler frequency of the fastest target speed of interest for generating a continuous sinusoidal Doppler signal corresponding in phase, amplitude and frequency to all the components present in the frequency spectrum of Doppler information.

Dabak et al. relates to interference cancellation in CDMA systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is 571- 272-3051. The examiner can normally be reached on Monday-Friday 10:00-6:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on 571- 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YOUNG T. TSE/  
Primary Examiner, Art Unit 2611